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REMARKS

Typographical errors were corrected in claim 66. No new matter has been added.

The above listing of claims provides an accurate version of the claims. Applicants respectfully request reconsideration and allowance of claims 10, 27, 29, 31-35, 37-46, and 55-70 in view of the following remarks.

Applicants acknowledge the withdrawal of the double patenting rejection and the rejection under 35 U.S.C. §112, first paragraph, for lack of written description.

Rejection under 35 U.S.C. §112, first paragraph

The Examiner rejected claims 10, 27, 29, 31-35, 37-46, and 55-70 under 35 U.S.C. §112, first paragraph, for lack of enablement. In the action of January 13, 2005, the Examiner asserted that the rejection was maintained "given that the disclosed plants were isolated by mutagenesis and introducing mutations is not a repeatable method for obtaining a plant, and applicant has not taught how to use the claimed nucleic acids, as stated in the last office action, and it would require undue experimentation to practice the claimed invention." This rejection is respectfully traversed.

The Examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) ("[the] examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure"). See also MPEP §2164.04. The Examiner has not met this burden.

The test for enablement is whether one skilled in the art at the time Applicants filed the present application could make and use the claimed invention from the disclosure in the specification coupled with the information known in the art without "undue" experimentation. See, for example, MPEP §2164.01. According to *In re Wands* (858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)), the factual considerations that must be weighed when determining whether "undue" experimentation would be required include: (1) the breadth of the claims, (2) the nature of the invention, (3) the state of the prior art, (4) the relative skill of those in the art, (5) the predictability or unpredictability of the art, (6) the amount of direction or guidance

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provided, (7) the presence or absence of working examples, and (8) the quantity of experimentation necessary. All the evidence related to each of these factors must be considered, and any conclusion of lack of enablement must be based on the evidence as a whole. MPEP §2164.01(a).

Here, the specification enables one of ordinary skill to use the nucleic acids of claims 10, 27, 29, 31-34, and 66. As indicated in §2164.01 of the MPEP, 35 U.S.C. §112 is satisfied if a statement of utility in the specification contains within it a connotation of how to use.

Applicants' specification provides such statements of utility. As previously indicated, the specification indicates the claimed nucleic acids can be used, for example, as markers in plant genetic mapping and plant breeding programs. Such markers may include restriction fragment length polymorphism (RFLP), random amplification polymorphism detection (RAPD), polymerase chain reaction (PCR) or self-sustained sequence replication (3SR) markers. Marker-assisted breeding techniques may be used to identify and follow a desired fatty acid composition during the breeding process. Marker-assisted breeding techniques may be used in addition to, or as an alternative to, other sorts of identification techniques. An example of marker-assisted breeding is the use of PCR primers that specifically amplify a sequence containing a desired mutation in a delta-12 or delta-15 desaturase. See, for example, the specification at page 27, lines 22-32. The specification also indicates in Example 14 that the claimed nucleic acids can be used to develop gene-specific PCR markers. Thus, in contrast to the Examiner's assertions, Applicants have taught how to use the claimed nucleic acids.

Furthermore, even if Applicants' specification did not contain such statements of utility, the claimed nucleic acids have a well-established utility that would be immediately appreciated by one of ordinary skill in the art. As indicated in §2107.01 of the MPEP, rejections under 35 U.S.C. §112, first paragraph, should not be imposed on inventions with well-established utilities. In view of the above remarks, the Examiner is requested to withdraw the rejection of claims 10, 27, 29, 31-34, and 66 under 35 U.S.C. §112, first paragraph.

The specification also enables one of ordinary skill in the art to make and use the plants of claims 35 and 37-46, and practice the methods of claims 55-65 and 67-70. In particular, the specification describes mutagenesis of *Brassica* and selection of various lines in great detail. See, specification, page 10, lines 10-24, page 20, line 39 through page 21, line 5; and page 24,

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lines 18-23. Extensive information is provided for mutagenesis of seeds, as well as for mutagenizing plants in other stages of development. Furthermore, the specification describes a variety of compounds that can be used to induce mutagenesis. See, specification, page 20, line 39 through page 21, line 4. The specification also indicates that low mutagen doses can be used to eliminate the occurrence of deleterious mutations and reduce the load of mutations carried by a plant such that single gene mutations can be rapidly selected. See, specification at page 24, lines 18-23.

The Examiner has not provided any reasoning why mutagenesis is not considered to be repeatable when the plant breeding art clearly uses these methods to obtain *Brassica* and *Helianthus* mutant lines. For example, U.S. Patent 5,710,366 at column 1, lines 36-66, refers to a number of published reports regarding sunflower mutagenesis. A copy of U.S. Patent 5,710,366 was provided in Applicants' response of March 14, 2005. Wong et al., EP 323 753, cited in the Information Disclosure Statement of April 9, 1996, discusses mutagenesis of *Brassica*. These publications confirm that, with the knowledge disclosed in the present specification concerning the nature of the mutations, one of ordinary skill could obtain the claimed plants with only routine experimentation.

In view of the above, the specification enables one of ordinary skill to make and use the claimed plants and practice the claimed methods without undue experimentation. The Examiner is requested to withdraw the rejection of claims 35, 37-46, 55-65, and 67-70 under 35 U.S.C. §112, first paragraph.

Rejections under 35 U.S.C. §112, second paragraph

The Examiner rejected claims 55, 57, 62, and 64 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner asserted that steps are missing in the claim for the production of a plant line in step (d).

Applicants disagree. Step (d) of claims 55, 57, 62, and 64 should not be limited to a particular method for producing a plant line. The specification indicates that a "line" is a group of plants that display little or no genetic variation between individuals for at least one trait. See, specification at page 10, lines 3-5. The specification also indicates that there are different methods for producing plant lines. For example, the specification indicates plant lines can be

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produced by several generations of self-pollination and selection, or by vegetative propagation from a single plant using tissue or cell culture techniques. See the specification at page 10, lines 5-8. One of ordinary skill in the art would have understood what is meant by self-pollination and selection, and vegetative propagation using tissue or cell culture. Therefore, one of ordinary skill would have understood what is meant by the recitation in step (d) of producing a plant line. The Examiner is requested to withdraw the rejection of claims 55, 57, 62, and 64 under 35 U.S.C. §112, second paragraph.

CONCLUSION

Applicants respectfully request reconsideration and allowance of claims 10, 27, 29, 31-35, 37-46, and 55-70 in view of the above remarks.

An petition for extension is attached. Please apply \$790 for the required RCE fee and any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: July 13, 2005

Ronald C. Lundquist
Ronald C. Lundquist, Ph.D.
Reg. No. 37,875

Fish & Richardson P.C., P.A.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696

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